



Cultivating the Future™

“We are facing a crisis. In just over 30 years, the human population will be too great for our planet to sustain us.

We have to make a change. We must find a solution.

We believe fish are a critical part of that solution.”

**Norman McCowan**  
PRESIDENT & FARMER



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**THE  
COMING  
PROTEIN  
DEFICIT**

**THE HUMAN POPULATION  
IS EXPECTED TO REACH  
9,000,000,000 BY 2050**

**APPROXIMATELY 20%  
OF THE HUMAN DIET  
IS PROTEIN**

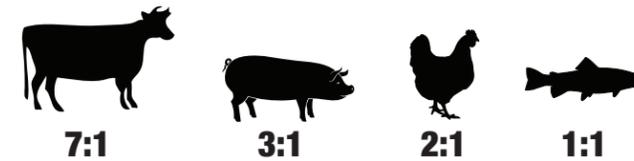
**WE CANNOT  
MEET THIS NEED  
WITH CURRENT FARMING  
AND CONSUMPTION TRENDS**

SOURCES: FAO, USDA, NOAA

# FISH ARE A HEALTHY, LOGICAL SOLUTION

## FISH HAVE A LOW FCR

Compared to most human sources of animal based protein, fish have a very low Feed Conversion Ratio. Feed Conversion Ratio is the amount of food an animal needs to eat in order to convert food into body weight. This makes them an efficient source of protein for humans to consume.



## FISH ARE GOOD FOR HUMANS

Fish provide a source of protein that is low in fat and has a number of health benefits for humans. Fish contain beneficial fatty acids particularly those in the Omega 3 group. Fish is believed to help prevent heart disease, lower cholesterol, decrease depression and improve skin problems just to name a few.

**OUR  
OCEANS,  
RIVERS  
& LAKES  
NEED A  
BREAK**

**In 2003, a scientific report estimated that industrial fishing had reduced the number of large ocean fish to just 10% of their pre-industrial population**

**A study of catch data published in 2006 in the journal *Science* predicted that if fishing rates continue apace, **all** the world's fisheries will have collapsed by the year 2048.**

Source: National Geographic

# **THE TRADE DEFICIT**

## **THE USA ALONE**

**CONSUMES 7,000,000  
TONS OF FISH PER YEAR**

**PRODUCES LESS THAN  
10% OF THE WORLDS FISH**

**IMPORTS 91%  
OF OUR FISH**

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**= \$12,000,000,000  
TRADE DEFICIT**

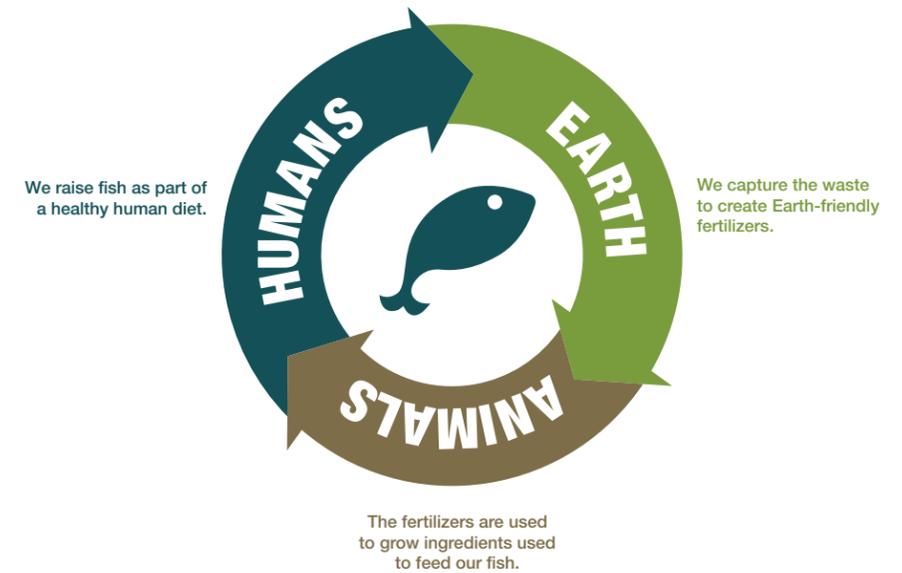
# **THE ROLE OF LAND-BASED AQUACULTURE**

**Land-based containment systems allow fish to be raised in tightly controlled environments to monitor fish health, air and water quality.**

**Land-based recirculating systems can be located anywhere - even in a desert.**

**On June 17th, 2014 the federal government announced a plan for aquaculture research to drive this industry forward in order to create food security for our people.**

# WE HAVE CREATED A SUSTAINABLE FOOD CYCLE



# OUR STORY

## IT ALL STARTED WITH PERCH

Bell was founded in 2005 to create a solution to the declining supply of Yellow Perch in the Great Lakes due to environmental factors.

The vision for Bell began when co-founder Michael Miller became interested in aquaculture in 1994. After studying this science and getting involved in the Indiana Aquaculture Association, he pursued a dream to bring the local and personal favorite Yellow Perch back to the area and the nation.

In 2007 Norman McCowan joined Bell. Norman's passion for fish, desire to innovate and vision for the future of aquaculture led Bell to proceed down the path to building a vertically integrated aquaculture farm. We experimented with various

technologies and approaches including Open Pond, RAS with Raceway and RAS with Cornell Dual Drain Design.

Currently Bell employs industry experts in operations, hatchery, husbandry, grow out, nutrition and biological monitoring. Our state-of-the-art, land-based RAS facility is on the cutting edge of technology in the aquaculture industry. Our fish rearing process has been designated Best Choice by the Monterey Bay Aquarium's Seafood Watch® Program. We partner with companies and organizations to share knowledge and work together to advance the aquaculture industry.



## ABOUT BELL FARMS

Situated on family owned farmland historically used to grow corn, our farm brings old world farming and new world innovation together to meet our coming food crisis through a sustainable, Earth-friendly approach. We work hard to maximize our resources and live in harmony with our surroundings, creating products that taste great, benefit humanity and the Earth.

Bell Farms™ is the implementation of extensive research, development and knowledge created by the team at Bell Aquaculture LLC with unprecedented dedication and investment into the vision of a vertically integrated, sustainable, land-based, contained fish farm.

We believe in the future of humanity and the Earth, therefore we believe in conservation in order to secure that future. We raise fish because we believe it is the key to feeding the human population of the future. We create value-added products from our by products because we know our 'waste' can be used to benefit the Earth.

# WHY DO SEAFOOD CHOICES MATTER?

Many of the world's fisheries are fished to capacity, or over-fished. Our choices as consumers have the power to make this situation worse, or improve it. Seafood Watch recommendations don't hinge on any single issue. Instead, they consider the fishery, habitat, species, management, and a host of other factors that affect each species. In this way, Seafood Watch offers a complete vision of sustainability.

The Monterey Bay Aquarium Seafood Watch® program helps consumers and businesses make choices for healthy oceans. Recommendations indicate which seafood items are "Best Choices," "Good Alternatives," and which ones you should "Avoid."

Seafood Watch recommendations are science-based, peer reviewed, and use ecosystem-based criteria. Since 1999, they have distributed over 45 million pocket guides, nearly a million smartphone applications have been downloaded and they have close to 200 partners across North America, including the two largest food service companies in the U.S.

OUR PROCESS HAS BEEN RATED

## BEST CHOICE

BY

# Monterey Bay Aquarium Seafood Watch®

Bell proudly supports the  
Monterey Bay Aquarium® Seafood Watch  
[www.seafoodwatch.org](http://www.seafoodwatch.org)

FISH • FEED • FERTILIZER



GOOD FOR HUMANS.  
GOOD FOR THE EARTH.



# FISH

## FARM RAISED TO BE THE BEST.

Our fish are raised in a contained indoor farm where we have control over environmental factors including biological security, water quality and temperature to provide the best possible environment to grow healthy, flavorful fish.

## NO HORMONES. NO ANTIBIOTICS.

We do not use hormones or antibiotics. We have biological monitoring protocols in place to deal with bacteria and health risks. Our team of scientific experts constantly monitor the fish health. We believe raising fish in this way leads to a more flavorful product and a healthier human population.

## WATER CLEAN ENOUGH TO DRINK.

Developed in cooperation with **The Conservation Fund's Freshwater Institute**, our Recirculating Aquaculture System (RAS) farm is specially designed to capture solid waste and recirculate 99.64% of our water on a flow basis. The Freshwater Institute works with the aquaculture industry to create systems that produce fish using much less water while meeting point-source effluent discharge regulations and reclaiming the nutrients that would normally be wasted.

## WHY RAS?

After experimenting with a number of technologies, we have found RAS to be the preferred technology to raise fish on a mass scale. Recirculating Aquaculture Systems directly translate into higher profits through tighter control with the ability to maintain water quality and fish welfare in the production environment. Because they can be location agnostic, RAS farms allow reduction in logistical costs and capitalize on efficient, cost effective utilities.

We continue to explore new technologies and research mother nature's own processes to leverage both science and nature to obtain the highest level of quality possible for our fish.

### BUILT BY PRANGER ENTERPRISES

[www.prangerent.com](http://www.prangerent.com)

### THE CONSERVATION FUND ENGINEERED BY THE CONSERVATION FUND'S FRESHWATER INSTITUTE

[www.conservationfund.org](http://www.conservationfund.org)



[www.pentairaes.com](http://www.pentairaes.com)

### BELL IS PROUD TO PARTNER WITH PENTAIR AQUATIC ECO SYSTEMS

Pentair Aquatic Eco Systems has been a long term partner of Bell and is critical to our success and the success of the industry. Our operation would not run without the dedication and support of the highly knowledgeable and experienced team Pentair has worked dilligently to bring together and the reliable, high quality equipment they provide.



**SWIMMING ONE DAY,  
ON YOUR TABLE THE NEXT.**



**FRESH IN. FRESH OUT.**

Our fish are processed in a HACCP compliant facility approximately 5 miles from our farm where they are harvested the same day. We supply complete traceability and institute proprietary quality testing designed to be the most stringent in the industry.



# AQUA FEED

## DEVELOPED BY SCIENCE.

Our feed formulations are the result of countless hours of research and development by our team of nutritionists, biologists and histologists. We are constantly evolving our knowledge to leverage scientific advancements and innovations.

## SUSTAINABLY FORMULATED.

Our feeds are formulated with sustainability in mind. Our goal is to provide a less than 1:1 fish in to fish out ratio for every feed we develop. Over 50% of our ingredients are sourced locally and we capitalize ingredients that might otherwise go to waste. We explore all types of plant and animal products to leverage ingredients that can be utilized to produce healthy, nutritious feed and fish.

## NUTRITIONALLY PROFILED.

Our feeds are nutritionally profiled around the life cycle and species of the fish. Each fish, like other animals, have different nutritional needs throughout their life cycle. Our team of scientists have over 70 years collective experience in feed formulation and fish health.





# FERTILIZER

## MOTHER NATURE'S FORMULA.

For thousands of years, fish have been used as fertilizer. Legend has it that the native americans would plant fish under their crops to give the plants the nutrients to grow and fruit. Fish naturally provide the macronutrients essential for plant health as well as a number of beneficial micronutrients.

## WE KNOW THE SOURCE.

Our fertilizer comes from our fish, raised on our farm and fed our feed. We don't use hormones. We don't use antibiotics. We know what goes in. We know what comes out.

## MORE THAN NPK.

NPK is the amount of Nitrogen (N), Phosphorus (P) and Potassium (K). These are known as macronutrients. Fish Rich contains other nutrients known as micronutrients including calcium and magnesium. Our fertilizers are made of natural ingredients essential for proper plant growth.





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